

**Notice of Allowability**

Application No.

10/659,489

Examiner

Randall Chin

Applicant(s)

CHAN, JOHN GEOFFREY

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 11 April 2005.
2. ☒ The allowed claim(s) is/are 1,8-22 and 24-31.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☒ to Paper No./Mail Date 03072005.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 041105 and 041505
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**RANDALL E. CHIN**  
PRIMARY EXAMINER

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Alexander on 18 April 2005.

The application has been amended as follows:

#### IN THE CLAIMS:

Claim 1, line 5, delete "comprising at least a first and second polymer" and insert --formed, at least in part, from a blend comprising a first and a second polymer or a mixture comprising a first and a second polymer--.

Claim 16, lines 1-2, delete "said first and said second polymer are a blend" and insert --said neck is sufficiently flexible to permit said head to be laterally displaced an angle of from about 15 degrees to about 5 degrees with respect to a longitudinal axis of said toothbrush prior to being displaced--.

Claim 17, line 1, change "16" to --9--.

Claim 18, line 1, change "16" to --8--.

Claim 19, line 1, change "16" to --1--.

Claim 20, line 1, change "16" to --9--.

Claim 21, line 1, change "16" to --1--.

Claim 22, line 1, change "16" to --1--.

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Claim 22, lines 1-3, delete "said first polymer is selected from the group consisting of polypropylene, polystyrene, acrylonitrile-styrene copolymer, and cellulose acetate-propionate, and mixtures thereof" and insert --said shaft reciprocates--.

Please add new claims 24-31:

24 (new). The electric toothbrush of claim 1, wherein a substantially entire portion of said neck is formed from said first polymer and said second polymer.

25 (new). An electric toothbrush, comprising:

- a handle having a cavity,

- a head;

- a flexible neck extending between said handle and said head, said flexible neck comprising at least a first and second polymer;

- a movable bristle carrier disposed on said head;

- a motor disposed within said cavity;

- a reciprocating flexible shaft disposed within said flexible neck and operatively connected to said movable bristle carrier and to said motor;

- wherein said head and said flexible neck comprise a channel, said channel extending through said flexible neck and into said head;

- wherein said neck can flex at least about 5 degrees when a force of at least about 4 N is applied to said head.

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26 (new). The electric toothbrush of claim 25, wherein said first polymer is selected from the group consisting of polypropylene, polystyrene, acrylonitrile-styrene copolymer, and cellulose acetate-propionate, and mixtures thereof.

27 (new). The electric toothbrush of claim 26, wherein said second polymer is selected from the group consisting of a thermoplastic elastomer, a thermoplastic olefin, a soft thermoplastic polyolefin, and an elastomer.

28 (new). The electric toothbrush of claim 27, wherein said neck is sufficiently flexible to permit said head to be reversibly rearwardly displaced an angle of from about 15 degrees to about 5 degrees with respect to a longitudinal axis of said toothbrush prior to being displaced.

29 (new). The electric toothbrush of claim 28, wherein the Shore A hardness of said second polymer is from about 25 to about 85.

30 (new). The electric toothbrush of claim 25, wherein the Shore A hardness of said second polymer is from about 25 to about 45 and the weight ratio of said first polymer to said second polymer is from about 90:10 to about 60:35.

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31 (new). The electric toothbrush of claim 28, wherein the Shore A hardness of said second polymer is from about 45 to about 65 and the weight ratio of said first polymer to said second polymer is from about 80:20 to about 50:50.

2. A telephonic conversation was held between the Examiner and Mr. Alexander on 18 April 2005. Agreement was reached to amend claim 1 to define over the prior art U.S. patent to Fischer 6,092,252. Minor changes were made to claims 16, 17, 18, 19, 20 and 21 to correct claim dependency. Claim 22 was amended to now recite that the shaft reciprocates. Claim 23 has been canceled. New claim 24 has been added to recite that substantially an entire portion of the neck is formed from the first polymer and the second polymer. New claims 25-31 have been also added which are allowable.

3. Any inquiry concerning this communication or earlier communication from the Examiner should be directed to Randall Chin whose telephone number is (571) 272-1270. The Examiner can normally be reached on Monday through Thursday and every other Friday.

If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, John Kim, can be reached at (571) 272-1142. The number for Technology Center 1700 is (571) 272-1700.

The central fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



R. Chin



Randall Chin  
Primary Examiner  
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